

What is claimed is:

1. An aluminum alloy comprising: about 0.35 - 0.60 wt.% Si, about 1.8-2.6 wt.% Fe, about 0.02 - 0.30 wt.% Cu, about 0.40 - 0.70 wt.% Mn, up to about 3.0 wt.% Zn, up to about 0.05 wt.% In, and up to about 0.05 wt.% Ti, the balance aluminum, incidental elements and impurities.
2. The aluminum alloy of claim 1, which further contains up to about 0.2 wt.% Zr.
3. The aluminum alloy of claim 1, which further contains up to about 0.3 wt.% Mg.
4. The aluminum alloy of claim 2, which further contains up to about 0.3 wt.% Mg.
5. The aluminum alloy of claim 1, which contains about 0.35-0.50 wt.% Si and about 1.8-2.4 wt.% Fe.
6. The aluminum alloy of claim 1, which contains about 0.35-0.45 wt.% Si.
7. The aluminum alloy of claim 1, which contains about 0.10-0.25 wt.% Cu.
8. The aluminum alloy of claim 1, which contains about 0.35 - 0.45 wt.% Si, about 1.8 - 2.4 wt.% Fe, about 0.4 - 0.7 wt.% Mn, about 0.15 - 0.25 wt.% Cu, up to about 1.5 wt.% Zn and about up to 0.03 wt.% In.
9. A process for making aluminum alloy finstock having improved combinations of post-braze tensile strength, electrical conductivity and self-corrosion resistance, said process comprising the steps of:

(a) continuously casting into sheet an alloy composition comprising: about 0.35 - 0.60 wt.% Si, about 1.8-2.6 wt.% Fe, about 0.02 - 0.30 wt.% Cu, about 0.40 - 0.70 wt.% Mn, up to about 3.0 wt.% Zn, up to about 0.05 wt.% In; up to about 0.05 wt.% Ti and up to about 0.2 wt.% Zr, the balance aluminum, incidental elements and impurities, said casting including a solidification rate of greater than about 200°C/sec. to substantially avoid formation of primary intermetallic solidification compound;

(b) rolling said sheet to an intermediate anneal gauge;

(c) annealing the rolled sheet; and

(d) cold rolling to final gauge.

10. The process of claim 9, wherein the alloy contains about 0.35-0.50 wt.% Si and about 1.8-2.4 wt.% Fe.

11. The process of claim 9, wherein the alloy contains about 0.35-0.45 wt.% Si.

12. The process of claim 9, wherein the alloy contains about 0.10-0.25 wt.% Cu.

13. The aluminum alloy of claim 9, wherein the alloy contains about 0.35 - 0.45 wt.% Si, about 1.8 - 2.4 wt.% Fe, about 0.4 - 0.7 wt.% Mn, about 0.15 - 0.25 wt.% Cu, up to about 1.5 wt.% Zn and about up to 0.03 wt.% In.

14. The process of claim 9, wherein step (a) is performed with a twin roll caster under rapidly cooling casting conditions that substantially avoid the formation of primary intermetallic solidification compounds and produces a sheet of thickness of about 2.0-10.0 mm.

15. The process of claim 9, wherein step (b) includes an initial intermediate thermal operation either at cast gauge or after some initial cold reduction.

16. The process of claim 15, wherein said intermediate thermal operation includes a 1-8 hour soak in a temperature range of about 320 - 450°C.

17. The process of claim 9, wherein step (b) comprises cold rolling.
18. The process of claim 9, wherein step (a) is performed with a high speed sheet or belt caster that freezes from at least one surface.
19. The process of claim 18, wherein step (b) includes both hot or warm rolling and cold rolling.
20. The process of claim 9, wherein said finstock has a post-braze ultimate tensile strength of about 125 Mpa or higher and an electrical conductivity value of about 48% IACS or greater.
21. The process of claim 9, wherein step (c) is performed at one or more temperatures below about 450°C.
22. The process of claim 9, wherein step (d) produces less than or equal to about a 50% reduction in sheet thickness.
23. A heat exchanger fabricated from finstock made from an aluminum alloy consisting essentially of: about 0.35 - 0.60 wt.% Si, about 1.8-2.6 wt.% Fe, about 0.02 - 0.30 wt.% Cu, about 0.40 - 0.70 wt.% Mn, up to about 3.0 wt.% Zn, up to about 0.05 wt.% In; up to about 0.05 wt.% Ti, up to about 0.2 wt.% Zr, and up to about 0.3 wt.% Mg, the balance aluminum, incidental elements and impurities.
24. The heat exchanger of claim 23, wherein the aluminum alloy contains about 0.35 - 0.50 wt.% Si and about 1.8 - 2.4 wt.% Fe.
25. The heat exchanger of claim 23, wherein the aluminum alloy contains about 0.35 - 0.45 wt.% Si.
26. The heat exchanger of claim 23, wherein the aluminum alloy contains about 0.10 - 0.25 wt.% Cu.

27. The heat exchanger of claim 23, wherein the aluminum alloy contains about 0.35 - 0.45 wt.% Si, about 1.8 - 2.4 wt.% Fe, about 0.4 - 0.7 wt.% Mn, about 0.10 - 0.25 wt.% Cu, up to about 1.5 wt.% Zn and about up to 0.03 wt.% In.

28. The heat exchanger of claim 23, wherein the aluminum alloy is of a gauge thickness about 75 microns or less.